

CLAIMS

1. A process for the treatment of waste gas wherein the waste gas is contacted with a zeolite Y which has a unit cell size of 24.17-24.45 Å and a water adsorption capacity ($p/p_0 = 0.2$, $T=25^\circ\text{C}$) of at most 5 wt.%, said zeolite Y having a silica-alumina molar ratio of at least 40.
2. The process of claim 1 wherein the waste gas is engine exhaust gas, in particular exhaust gas from a diesel or gasoline engine.
3. The process of claim 1, wherein the zeolite functions as an adsorbent which adsorbs organic hydrocarbons at a low temperature and desorbs them at a higher temperature.
4. The process of claim 1 wherein the zeolite is part of an oxidation catalyst, the zeolite optionally comprising a noble metal of Group VIII of the periodic table of elements.
5. The process of claim 1 wherein the zeolite is part of a NO_x reducing catalyst and/or of a NO_x trap catalyst, the zeolite optionally comprising noble metal of Group VIII of the periodic table of elements and/or a non-noble metal of Group VIII of the periodic table and optionally an alkaline earth metal component such as barium.
6. The process of claim 1 wherein the zeolite is periodically subjected to a temperature above 350°C.
7. A unit suitable for the treatment of exhaust gas according to the process of claim 1, which comprises a zeolite Y which has a unit cell size of

24.17-24.45 Å, a water adsorption capacity ($p/p_0 = 0.2$, $T=25^\circ\text{C}$) of at most 5 wt.%, and a silica-alumina molar ratio of at least 40

8. The unit of claim 7 which comprises a monolith at least part of the
5 surface of which is coated with the zeolite.
9. The unit of claim 7 which additionally comprises a Group VIII non-noble metal and/or a Group VIII noble metal, and/or an alkaline earth metal, and/or a Group I metal.
10
10. A process for the treatment of exhaust gas from a diesel engine, wherein the engine exhaust system is provided with a hydrocarbon adsorbent and/or an oxidation catalyst and/or a NO_x conversion catalyst and/or a NO_x trap catalyst, wherein the hydrocarbon adsorbent and/or the oxidation catalyst and/or the NO_x conversion catalyst and/or the NO_x trap catalyst comprise a zeolite Y which has a unit cell size of
15 24.17-24.45 Å, a water adsorption capacity ($p/p_0 = 0.2$, $T=25^\circ\text{C}$) of at most 5 wt.% and a silica-alumina molar ratio of at least 40.
- 20 11. The process of claim 10 wherein the zeolite is periodically subjected to a temperature above 350°C.
12. A unit suitable for the treatment of exhaust gas according to the process
25 of claim 10, which comprises a zeolite Y which has a unit cell size of 24.17-24.45 Å, a water adsorption capacity ($p/p_0 = 0.2$, $T=25^\circ\text{C}$) of at most 5 wt.%, and a silica-alumina molar ratio of at least 40
13. The unit of claim 12 which comprises a monolith at least part of the
30 surface of which is coated with the zeolite.

14. The unit of claim 12 which additionally comprises a Group VIII non-noble metal and/or a Group VIII noble metal, and/or an alkaline earth metal, and/or a Group I metal.